

EXHIBIT "Y"

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK

NABIL N. GHALY,

Plaintiff,

-v.-

HASBRO, INC.,

Defendant.

NABIL N. GHALY,

Plaintiff,

-v.-

TIGER ELECTRONICS, INC.; TIGER
ELECTRONICS, LTD. as true party in interest as
successor to Tiger Electronics, Inc.; LION
HOLDINGS, INC.; ROBERT DUNN GLICK, as
Trustee for liquidating trust for Lion Holdings, Inc.;
ROBERT DUNN GLICK, as Trustee for the Rissman
Family 1997 Trust; OWEN RANDALL RISSMAN;
TIGER ELECTRONICS, LTD.; and HASBRO, INC.,

Defendants.

MEMORANDUM OF DECISION AND ORDER

97-CV-7037 (DRH) (VVP)

98-CV-5239 (DRH)(VVP)

Appearances:

For the Plaintiff

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For Defendants

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HURLEY, District Judge:

The Plaintiff is the holder of United States Patent No. 5,286,037 ("the '037 patent"), issued on February 14, 1994, for an "electronic hand-held logic game." In this action, he sues the Defendants, alleging that several of their products infringed on the '037 patent. Presently before the Court is the Defendants' motion for summary judgment on the issue of claim construction, as required by *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996) ("construction of a patent, including terms of art within its claim, is exclusively within the province of the court."), and the Plaintiff's motion to strike a portion of the Defendants' brief as irrelevant and prejudicial.

BACKGROUND

In general, the Plaintiff's device is a hand-held electronic game consisting primarily of a playfield composed of a matrix of buttons, each illuminated in one of several colors. (As described in the preferred embodiment, the playfield is a four-by-four square, consisting of a total of 16 buttons.) A player pressing one of the buttons will cause that button, as well as possibly one or more additional buttons on the playfield, to change to a different color. The number and position of the buttons changing color, as well as the color(s) they change to, are determined by various algorithms programmed into the game. The player's goal is to manipulate the various buttons in such a manner as to cause all of the buttons on the playfield to display the same color.

More specifically, the Plaintiff distinguishes his device from previous hand-held logic puzzle games by the particular method in which the game calculates the initial starting conditions and the effect each button has on the other buttons. Put as simply as possible, the Plaintiff's device initiates a game by randomly assigning values to each of eight locations along the left and bottom edges of the matrix (the "transmitters"), and to each of eight locations in the top and right edges (the "receivers"). The specification and diagrams refer to these values as "operating codes." Next, the device queries the status of each button on the playfield as either "on" or "off." The device then establishes an initial set of routes through the playfield, connecting each transmitter location along the bottom and left of the playfield with a receiver location along the top and right. The actual path of the route is determined by a predefined "routing square" which prescribes one of two paths through the square based on the status of the button in that square—that is, a route that passes through a particular button which is in the "on" position will be re-routed when that button is in the "off" position.

Having established the routes, the device next assigns starting colors to each of the receiver locations along the top and right edges of the playfield. The assignment of the colors is made by passing each receiver value and the corresponding transmitter value at the other end of its route through specified Boolean logic¹ functions. The result of the Boolean functions yields a three digit binary number referred to as a "color code," one of which is assigned to each of the

¹Boolean logic is used to perform operations on binary numbers, such as those used in the operating codes. In general, Boolean logic involves functions (*e.g.* "the two values are the same" or "one, and only one, of the two values is a zero") which compare two binary values and return a single digit result indicating that the conditions required by the function are met ("true") or not met ("false").

eight receiver locations on the top and right edges of the playfield. The device then creates a new set of routes backwards, from the receiver locations to the transmitter locations, again based on the routing square and the status of the buttons that each route passes through along the way.

As a result of these steps, each button is assigned four routes: a route from a transmitter to a receiver when the button is in the "on" position; a different route from a transmitter to a receiver when the button is in the "off" position; a route from a receiver to a transmitter when the button is in the "on" position; and a route from a receiver to a transmitter when the button is in the "off" position. The latter two routes, from receiver to transmitter, also carry the color codes assigned to the receiver locations they originate at, and thus, each button carries two assigned color codes.

At this point, the device is ready to begin play. The device illuminates each button in the proper color based on the color codes routed through it and its current status of "on" or "off." The device then checks to see if all buttons are the same color, and, if so, diverts to a new process described below. If all the buttons are not currently the same color, the unit plays a sound to alert the player that it is ready for the player's next move, and waits. When the player presses one of the buttons, he changes that button's status from "on" to "off" or vice-versa. The device then proceeds to re-generate a full set of new routes from the transmitter locations to the receiver locations, re-assign the colors to the receiver locations, and re-generate return routes for the color codes, and display the proper colors for each button, all in the manner described above.

Obviously, because the player has changed the status of one of the buttons on the playfield, the new route from some of the transmitters to some of the receivers will be different from those that existed before the button was pressed. For example, while transmitter 3 may

have previously been matched to receiver 6, the re-routing of the playfield might now result in transmitter 3 connecting to receiver 1. This change in the correspondence between transmitter and receiver values might result in a different color code being generated and assigned to the receiver when the transmitter and receiver values are compared using the Boolean functions. Moreover, the change might also alter the routes back through the device that carry the color codes from the receivers to the transmitters. As a result, each press of a button changes that button's color, and may also affect one or more colors of other buttons on any of the changed routes may change as well. An additional consequence of the unique routing approach by the Plaintiff is that a button which once caused its neighbors to the right and left to change color might, as a result of newly assigned routes from buttons pressed elsewhere, later cause buttons on only its top and bottom to change color.

If all of the buttons display the same color, the device plays a tune associated with the color shown and causes all of the buttons to flash briefly and then display random colors while the tune plays. The device notes the color that the player has solved, and then checks to see if the player has solved all of the colors involved in the game. If not, the game returns to regular play mode, and the player continues to attempt to solve the remaining colors. Once all of the colors are solved, the device plays a tune accompanied by flashing buttons, and the game ends.

Primarily at issue are Claims 1 and 23 in the '037 patent. Claim 1 consists of 9 elements, and reads as follows:

1. An electronic game device comprising:
 - a. a housing for the device;

- b. means for generating a plurality of codes hereinafter referred to as operating codes;
- c. plurality of entry control means;
- d. plurality of routing means defining a respective plurality of playing positions on the surface of said housing, each of said routing means being actuatable by said entry control means to route said operating codes within the device;
- e. means to generate a plurality of codes, hereinafter referred to as color codes, from said plurality of operating codes;
- f. plurality of multi-color light emitting means;
- g. means to route said color codes to said light emitting means in accordance with the determination of said routing means;
- h. means to decode said plurality of color codes and activate said plurality of multi-color light emitting means;
- i. means for varying the level of difficulty of any particular game; and
- j. Sensorially perceptible indicating means responsive to said entry control means for generating a first sensorially perceptible indication corresponding to each activation of the entry control means, a plurality of sensorially perceptible and distinct indication of each of which is corresponding to each of a plurality of predetermined colors being displayed at al (sic) multi-color light emitting means and a sensorially perceptible indication corresponding to the successful completion of a game.

Claim 23 is similar to Claim 1, with the primary exception being element e of Claim 23, which replaces element f of Claim 1, and reads "means to pictorially represent a plurality of images

wherein each of said plurality of playing positions is indicated to provide a plurality of display positions, each of said display positions is used to indicate any of said plurality of images." In addition, Claim 23 replaces Claim 1's reference to "color codes" with "display codes." The parties dispute the construction to be given to nearly every element of Claim 1, and to element e of Claim 23.

A. Governing law

The threshold inquiry for construing a patent claim as a matter of law is to "look to the words of the claims themselves, both asserted and nonasserted, to define the scope of the patented invention." *Vitronics v. Conceptronic, Inc.*, 90 F.3d 1576, 1582-83 (Fed. Cir.1996). Terms in a claim are "generally given their ordinary and customary meaning" unless the patentee has clearly stated special definitions in the patent specification or file history. *Id.* Second, it is necessary to review the patent specification, which is usually "dispositive; it is the single best guide to the meaning of a disputed term." *Id.* "Third, the court may also consider the prosecution history of the patent, if in evidence." *Id.* Unless the intrinsic evidence is "genuinely ambiguous," it is improper to rely on extrinsic evidence, such as expert and inventor testimony, in construing the claim. *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1332 (Fed. Cir.2001); *Robotic Vision Sys., Inc. v. View Eng'g, Inc.*, 189 F.3d 1370, 1375 (Fed. Cir.1999) ("Often, the intrinsic evidence alone will resolve any ambiguity in a disputed claim term, and, in such instances, reliance on extrinsic evidence is improper.")

Additionally, "a patent is not to be limited to the preferred embodiments shown in the specification." *Ziegler v. Phillips Petroleum Company*, 483 F.2d 858, 879 (5th Cir.1973), *cert. denied*, 414 U.S. 1079 (1973), *citing Continental Paper Bag Co. v. Eastern Paper Bag Co.*, 210

U.S. 405 (1908). However, the designation of a particular embodiment as "preferred" does not of itself broaden the claims beyond their support in the specification. *Wang Labs., Inc. v. America Online, Inc.*, 197 F.3d 1377, 1383 (Fed. Cir.1999). While a claim must be read in light of the specifications, limitations from the specification may not be read into the claims. *Bell Atlantic Network Service, Inc. v. Covad Communications, Inc.*, 262 F.3d 1258, 1270 (Fed. Cir. 2001)

Many of the elements of the Plaintiff's claims are written in "means plus function" format, in that they describe "a means or step for performing a specified function without the recital of structure, material, or acts in support thereof." 35 U.S.C. § 112, ¶ 6. Construction of these claims requires the court to identify the function being performed in the claim and determine what structures have been disclosed in the specification that correspond to the means for performing that function. *Kemco Sales, Inc. v. Control Papers Co., Inc.*, 208 F.3d 1352, 1361 (Fed. Cir.2000). Such claims "shall be construed to cover the corresponding structure, material, or acts described in the specification." 35 U.S.C. § 112, ¶ 6. |

B. As to Claim 1, Element b- "means for generating a plurality of codes"

Claim 1, Element b reads "means for generating a plurality of codes hereinafter referred to as operating codes." The Plaintiff contends that this element should be construed as "structures that generates a first set of codes ('operating codes') for the purpose of generating a second set of codes ('color codes')," namely, "any structure connected to, or incorporated in a hard-wired control logic, and which generates electrical signals or codes"; "a control logic on a processor that generates a plurality of codes or signals in binary form. . ."; or "a control logic executed on a processor that includes a data section containing a plurality of codes or signals in binary form. . . ." The Defendant contends that this element should be construed as "control

extent to which the routing squares are used. The proper construction given to Element d as a whole, then, is "control logic executed on a processor that defines paths for operating codes through the switches on the playfield by means of a routing square which prescribes predefined routes based on the position of said switches."

D. Claim 1, Element e- "means to generate a plurality of . . . color codes"

Claim 1, Element e states "means to generate a plurality of codes, hereinafter referred to as color codes, from said plurality of operating codes." The Plaintiff contends that this element should be construed as any of "a control logic executed on a processor that performs an appropriate boolean function on pairs of operating codes to generate color codes"; "a control logic executed on a processor that determines color codes associated with pairs of operating codes by looking up data stored in a data section of ROM"; or "a plurality of boolean logic devices incorporated in a hard-wired control logic." The Defendant contends that the element should be construed as "control logic executed on a processor that performs two mathematical functions (namely an inclusive OR and an XOR function) on the transmitter op-code and receiver op-code pairs at each of the locations on two edges of the field of play to produce color codes at each of these locations at the positions at the top and right edges of the field of play."

The specification describes the method of generating color codes at 6:18-47. In particular, it states that "the central processing unit . . . generates a color code at each opcode receiver." As described above, the color codes are generated at each of the receiver locations by applying specified boolean logic functions to the pairs of connected operating codes, one digit at a time. 6:34-42. The description of the preferred embodiment in the specification explains that the leftmost digits in the operating codes are subjected to what the specification describes as an

"INCLUSIVE OR" function.³ 6:34-40. The two remaining digits are subjected to the "EXCLUSIVE OR" function. 6:40-43. However, in a mathematical explanation of the logic to be used for any size playfield, the Plaintiff does not specifically describe the boolean function to be used, supplying only a variable to represent the function to be applied to the operating codes. 12:57-59. This suggests that other embodiments of the game might require different boolean functions to generate proper color codes.

Because element e is written in means plus function language, the Court must identify those structures by which the device generates color codes. The patent clearly states that "to generate the color code at receiver '1,' the central processing unit" executes the appropriate boolean functions. 6:34-35. Therefore, the structures that appear to be used to generate the color codes are the central processing unit and the boolean functions. No other structures appear to be involved in the generation of the color codes.

Accordingly, the proper construction of element e is "control logic executed on a processor that performs predefined boolean functions on the operating code pairs."

F. Claim 1, Element f - "plurality of multi-color light emitting means"

Element f claims a "plurality of multi-color light emitting means." The Plaintiff contends that this should be construed as either "any display or structure that provides visual representation of the outputs (color codes), of an electronic puzzle, in two or more colors that

³There is a substantial dispute between the parties over the Plaintiff's reference to the "INCLUSIVE OR" function. The Plaintiff admits that while the specification refers to the "INCLUSIVE OR" function, he intended to describe the operation of the "EXCLUSIVE NOR" function. Figure 23, which shows a matrix by which color codes are assigned, appears to actually apply the "EXCLUSIVE NOR" function.

M. The Plaintiff's motion to strike

The Plaintiff separately moves to strike Section IV of the Defendants' brief on the grounds that it improperly interjects consideration of the accused devices into the claim construction process. Section IV of the Defendants' brief describes the lineage of the accused devices as deriving from a hand-held game called "Merlin," created by Parker Brothers in the late 1970s. One of Merlin's operations was a game entitled "Magic Square," in which players attempted to illuminate a specific pattern of lights on a 3 x 3 playfield, where each press of a button changed the status of that button and several others on the playfield in a predetermined fashion. The Defendants go on to explain the basic operation of "Merlin-type devices," as well as a summary of how the accused devices operate. The Plaintiff alleges that such information is irrelevant to the claims construction process and should be stricken as immaterial and prejudicial.

As a general matter, patent claims are construed objectively, without respect to the accused devices. *SRI Int'l v. Matsushita Electric Corp. of America*, 775 F.2d 1107, 1118 (Fed. Cir. 1985). However, the court is only required to construe those claims which are actually in dispute. *Vivid Technologies, Inc. v. American Science & Engineering, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999). The claims in dispute are necessarily framed by the intersections of the patented and accused products, and thus, the court's awareness of the accused products helps to limit the court's consideration to only those claims that are genuinely in need of construction. *See Scripps Clinic & Research Foundation v. Genetech, Ltd.*, 927 F.2d 1565, 1580 (Fed. Cir. 1991) ("Of course the particular accused product (or process) is kept in mind, for it is efficient to focus on the construction of only the disputed elements or limitations of the claims.").

In this regard, the Court has considered the Defendants' recitation of Merlin and its progeny solely as background information, particularly with regard to the distinction between previous generations of "hard-wired" games, in which a particular button has a predefined and unchanging effect on other buttons, and the Plaintiff's innovation, which generates unique relations between buttons both between different games and indeed, within each individual game. Consideration of how Merlin and the accused devices operate helps to constrain the claims to be construed here to only those claims that are or may be present in one or more of the accused devices. The Court has given no consideration whatsoever to the contents of Section IV of the Defendants' brief for purposes of construing the disputed claims themselves, and has relied entirely on the contents of the '037 patent for that purpose. Accordingly, the Plaintiff's motion to strike is denied.

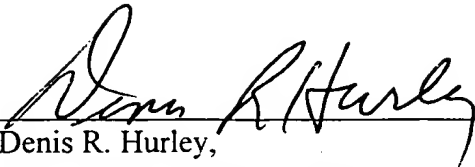
CONCLUSION

For the foregoing reasons, the Defendants' motion to for summary judgment is GRANTED insofar as the Court has construed the disputed claims in the '037 patent as a matter of law. These constructions are set forth herein. The Court expressly declines to make any finding of actual infringement at this time. Because actual infringement is a question of fact, the Court anticipates that a trial will be necessary, unless either party makes a letter request for leave to move for summary judgment on the issue of actual infringement within 45 days of the date of this order.

The Plaintiff's motion to strike Section IV of the Defendants' brief is DENIED.

SO ORDERED.

Dated: Central Islip, N.Y.
March 5, 2002



Denis R. Hurley,
United States District t Judge